75% AWS cost and resource optimization in just one week for Shoebacca

Christmas and New Year are some of the most heartwarming holidays that bring a ton of joy and happiness, everyone looks forward to. Or so we believe. While this is definitely true for most of us, holiday seasons can also put a lot of pressure on businesses worldwide. However, Christmas is all about miracles, right? Well, let us tell you how IT Svit made a marvel for one amazing online retailer – Shoebacca.

Shoebacca: What do they do?

Shoebacca is a Texas-based private company that offers footwear and apparel of all different sizes and styles. On the website, you can shop for brands such as Puma, Keen, Saucony, Reebok, and many others. With Shoebacca, you'll find a pair to your liking. The company aims to provide its clients with hassle-free shopping at a reasonable price.

Challenge details

As our client approached the season of Christmas and New Year, they experienced increased concern regarding the ability of infrastructure to handle an upcoming surge in traffic. These concerns emerged due to the issue occurring regularly – the client's existing setup would collapse without apparent reason, and the client anticipated that the same thing would happen again during the holiday season.

A robust and reliable infrastructure is especially critical because of a growing demand for online shopping and other digital services. Many websites crash when experiencing peak traffic if they are not prepared for that sort of system overload, so it's crucial to ensure that the entire infrastructure can withstand the surge in traffic during those peak times.

Technical roadmap

1. Reconfigure volume snapshot lifecycle policy, as there is currently no proper rotation, with 922 snapshots in total. Moreover, snapshots are done every 2–4 hours, which is excessive and not needed. Lifecycle policy also requires some touch–ups, so we plan to reconfigure it as well. To do that, we will change the daily and weekly snapshots schedule.
2. Set up CloudWatch agents. Currently, CPU/Memory metrics from Windows hosts are not collected, which prevents us from analyzing data in the long term – it is impossible to get an analysis over at least one month.
3. Remove redundant volumes. Eight volumes are not in use – we will perform a backup and remove those volumes for now.
4. We have provisioned a significant amount of IOPS for some volumes that are not currently being used. Our task is to decrease the provisioned IOPS while ensuring we avoid causing downtime during this process.

Our solutions

1. Identify the underlying causes of the platform's vulnerability and come up with the most effective solutions within the limited timeframe, which is up to five working days.
2. Optimize the cost of the current setup to save the budget but still have an opportunity to upgrade the whole project.
3. Take an active part in the project upgrading process and prepare cloud architecture design to make the updated project robust, cost-effective, easily scaled, and secure.
4. Help design and build a high-volume event-driven messaging integration infrastructure for distributed systems.

Our outcomes

In just one week, the IT Svit team was able to achieve the following results:

- The system successfully went through peak load during the holidays and remained stable throughout the period.
- All resources were optimized.
- The infrastructure was designed cost-effectively and securely.
- Snapshot policies were completely overhauled, and IOPSes decreased, reducing 75% of AWS cost (from $26000/month to $4000/month).

Alongside completing all objectives, we've partnered with Shoebacca to help them build a high-volume event-driven messaging integration infrastructure for their distributed systems. Currently, we are actively participating in the early stages of the development process – we have already assisted the company's in-house team with the containerization of the project and designed infrastructure cost-effectively and securely that provides the system with scalability and stability 24/7. More is to come – further infrastructure implementation is already underway!

A few last words: There is nothing impossible when you team up with professionals!

Here at IT Svit, we believe that businesses should work together to achieve their goals and overcome various obstacles. Once the company turns to us for help, we launch the process of finding the most suitable solutions to help us achieve excellent outcomes. Tight deadlines? Not a problem. Is there a problem and need a ready solution for it? We got it. Message us with a description of any situation, and we'll help you achieve your business objectives through superior technical expertise, fine-tuned workflows, and reduced costs.